

LIST OF CURRENT CLAIMS

1. (Currently Amended) [[-]] Cooling arrangement for an electric motor or generator that includes consisting of a housing, what is called a slotless “slotless” tubular stator lamination (4), a rotor (2) with permanent magnets and electric windings (25-26) which are provided between the stator lamination (4) and the rotor (2), comprising characterised in that the cooling comprises a cooler (6) upon which said windings (25-26) are provided, said cooler comprising and which is formed of a cooling element (7) which is provided between the stator lamination (4) and the rotor, said (2) and which cooling element being (7) is provided with teeth (12) directed radially towards the rotor and (2) which extend in an the axial direction of the stator (1) and in between which axially directed grooves (13) are defined, such that the cooling element (7) has an external form of a conventional stator lamination with teeth for providing said windings (25-26).
2. (Currently Amended) [[-]] Cooling arrangement improved cooling according to claim 1, wherein characterised in that the above-mentioned teeth (12) and grooves (13) are evenly distributed about an over the inner perimeter of the cooler (6).
3. (Currently Amended) [[-]] Cooling arrangement improved cooling according to claim 1, wherein characterised in that the above-mentioned windings (25-26) are provided around said the above-mentioned teeth and wherein the (12), whereby these windings (25-26) have axial parts (25) which extend in the above-mentioned grooves (13) and bent parts (26) which are bundled together into what is called a winding head disposed (27) on both far ends of the stator (1).
4. (Currently Amended) [[-]] Cooling arrangement improved cooling according to claim 1, wherein characterised in that the cooler comprises (6) is formed of a cooling element having (7) with one or several passages (15) for a cooling fluid.
5. (Currently Amended) [[-]] Cooling arrangement improved cooling according to claim 4, wherein characterised in that the above-mentioned passages (15) are axially directed and are connected to an outlet collector (8) on one far end of the stator (1)

and to an inlet collector (9) on the other far end of the stator (1) respectively.

6. (Currently Amended) [[-]] Cooling arrangement Improved cooling according to claim 4, wherein characterised in that the above-mentioned cooling element comprises (7) is formed of a double-walled tube including with an outer tube (10) and an inner tube (11).

7. (Currently Amended) [[-]] Cooling arrangement Improved cooling according to claim 6, wherein characterised in that the outer tube (10) is a cylindrical tube whose outer diameter corresponds to the inner diameter of the stator lamination (4), and whereas the inner tube (11) is a corrugated tube with axially directed teeth (12) and grooves (13), said whereby the outer and the inner tubes (10-11) are connected to each other by means of partitions (14) which, together with the outer and the inner tubes (10-11), define the above-mentioned passages (15) for the cooling fluid.

8. (Currently Amended) [[-]] Cooling arrangement Improved cooling according to claim 4, wherein characterised in that the cooling element comprises (7) is formed of axially directed pipes (29) which form said the above-mentioned passages (15) and which are provided at mutually equal distances from each other between the stator lamination (4) and the rotor (2) and are cased at least with their far ends in two ring-shaped flanges (30) which are fixed in the stator lamination (4).

9. (Currently Amended) [[-]] Cooling arrangement Improved cooling stator according to claim 8, wherein characterised in that at least a part of the above-mentioned pipes is (29) are situated partially between the axial parts (25) of the above-mentioned windings (25-26).

10. (Currently Amended) [[-]] Cooling arrangement Improved cooling according to claim 8, wherein characterised in that the above-mentioned ring-shaped flanges (30) are provided with teeth (33) which are radially directed towards the rotor, in between which said the above-mentioned windings (25) are provided.

11. (Currently Amended) [[-]] Cooling arrangement Improved cooling according to

claim 10, wherein characterised in that the space between the pipes (29) and the axial parts (25) of the windings (25-26) is at least partially filled with a thermally conductive and electrically insulating filling material (35).

12. (Currently Amended) [[-]] Cooling arrangement ~~Improved cooling~~ according to claim 4, wherein characterised in that the above-mentioned outlet and inlet collectors (8-9) are each formed of a ring-shaped element which confines a ring-shaped chamber (37), said whereby this ring-shaped element [[is]] being connected to a side wall (19) against a far end of the cooling element (7) and wherein whereby this side wall (19) has been worked open at the said above-mentioned passages (15) of the cooling element (7).

13. (Currently Amended) [[-]] Cooling arrangement ~~Improved cooling~~ according to claim 12, wherein characterised in that each above-mentioned ring-shaped element is connected to the above-mentioned housing (3) with an outer wall (16) and wherein in that at least one opening (20-21) is provided in this outer wall (16), which opening is situated opposite to an outlet opening and (21), inlet opening, (23) respectively, in the housing (3).

14. (Currently Amended) [[-]] Cooling arrangement ~~Improved cooling~~ according to claim 13, wherein, characterised in that in the above-mentioned ring-shaped element in the wall (17) directed towards the rotor there (2) is provided a recess (36) in which the winding head (27) is cased on the respective far end concerned of the stator (1).

15. (Currently Amended) [[-]] Cooling arrangement ~~Improved cooling~~ according to claim 4, wherein characterised in that the above-mentioned outlet and inlet collectors comprise (8-9) are formed of a ring-shaped chamber (37) which is confined by the housing (3) ; said of the cooling element (7); [[of]] an inner tube (38) which is provided concentrically in the cooling element (7); and [[of]] a ring-shaped lid (39) which is connected to the housing (3) and to said the above-mentioned inner tube (38).

16. (Currently Amended) [[-]] Cooling arrangement ~~Improved cooling~~ according to

claim 15, wherein characterised in that in the housing (3), at the height of the outlet and inlet collectors (8-9), there is provided at least one outlet (21) or inlet opening, (23) respectively.

17. (Currently Amended) [[-]] Cooling arrangement ~~Improved cooling~~ according to claim 1, wherein characterised in that the cooler comprises (6) is made of a thermally conductive and electrically insulating material.

18. (Currently Amended) [[-]] Cooling arrangement ~~Improved cooling~~ according to claim 1, wherein characterised in that the cooler defines (6) forms a separation between the cooling fluid and the electric windings (25-26).